

**SECRET**



COR-0678

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19 November 1959

NRO REVIEW COMPLETED

MEMORANDUM FOR THE RECORD

SUBJECT: Concurrence in Letter Contract No. [ ] with ITEK Corporation, Boston, Mass., Project CORONA (AIR FORCE)

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1. This memorandum contains a recommendation submitted for concurrence of the undersigned. Such recommendation is contained in Paragraph 5.

2. Letter Contract No. [ ] covers the procurement of ten Individual Mensuration Viewers and Handbooks of Operation and Maintenance. This procurement is being made on behalf of the Air Force and is a part of the Joint Procurement Program for the Intelligence Community of Exploitation and Processing Equipment related to Project CORONA. The Letter Contract is being issued on a CPFF basis because of the development nature of five of the Viewers which are of a more advance design. It is anticipated that the Contract will be definitized by 31 January 1960 and will include an item for a Training Program of SAC personnel.

3. Letter Contract No. [ ] obligates an amount of [ ] chargeable in Fiscal Year 1960. [ ] By concurrence to this memorandum the Comptroller signifies that sufficient funds are available for this obligation.

4. Certification of funds for this contract will be handled under the procedure approved by the Director of Central Intelligence on 15 December 1956 which, in effect, results in all covert expenses involving issuance of Treasury Checks being accumulated in a separate account within the Finance Division. The amounts in this account will be periodically scheduled for certification of the vouchers by the Director. This procedure eliminates the necessity for a separate certification of authority under Section 8(b) of Public Law 110, 81st Congress, (formerly 10(b) see 85-507 dtd 7/7/58) for each contract.

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5. Concurrence in Letter Contract No.  is recommended.

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Contracting Officer, DPD

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**CONCURRENCES:**

Comptroller, DPD

DATE

11/20/59

Office of General Counsel

DATE

11/20/59

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DPD-DD/P:  (19-11-59)

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1.1 Reentry Trajectory

The Contractor shall utilize to the maximum extent the previous studies and analysis for reentry powered flight and trajectory conditions used in the Biomedical Recovery Capsule Program. These previous studies shall be modified only to the extent necessitated by changes in the Mk 2 RV design. If these changes affect previously supplied technical inputs to IMSD, new inputs will be supplied in report form. Points of particular importance are:

- a. Optimum retro rocket angle relative to true horizontal.
- b. Velocity increment, acceleration history and reentry path.
- c. Reentry body dynamics.
- d. Dispersion summary.
- e. Equations of motion and data pertinent to input prediction calculations from tracking data at time of outdown.
- f. Reentry and powered flight survival evaluation due to possible WS117L mission profile changes.

1.2 Reentry Body

The Contractor shall conduct studies and design analysis of the reentry body as required by changes from the Mk 2 SARV. A summary of such changes shall be furnished in technical report form.

1.3 Recovery System

The Contractor shall participate in operational analysis associated with the planning of the search and recovery operation.

1.4 Recovery Analysis

The Contractor shall submit a report of results of recovery analysis (including dispersion) suitable for flight planning and post flight comparison, if changes from the Mk 2 SARV so require.

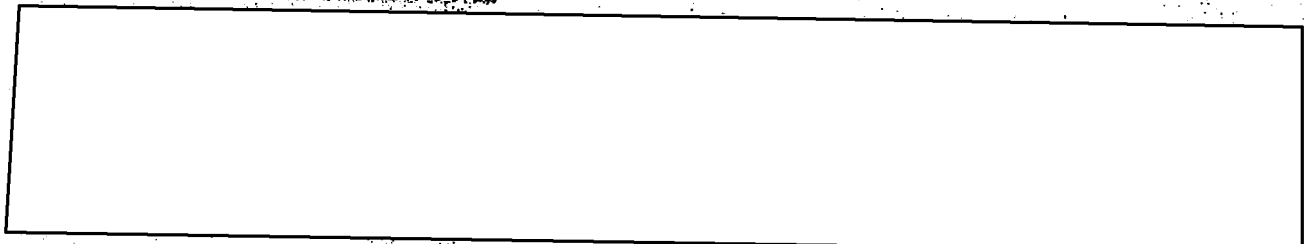
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2.5 Engineering Reports

The Contractor shall furnish INSD with information, copies of Engineering Reports on all significant Mark 3 studies and Engineering investigations. These reports will consist of the "in-house" documents prepared by the Contractor for his use and then forwarded to INSD for information.

2.6 Design and Development

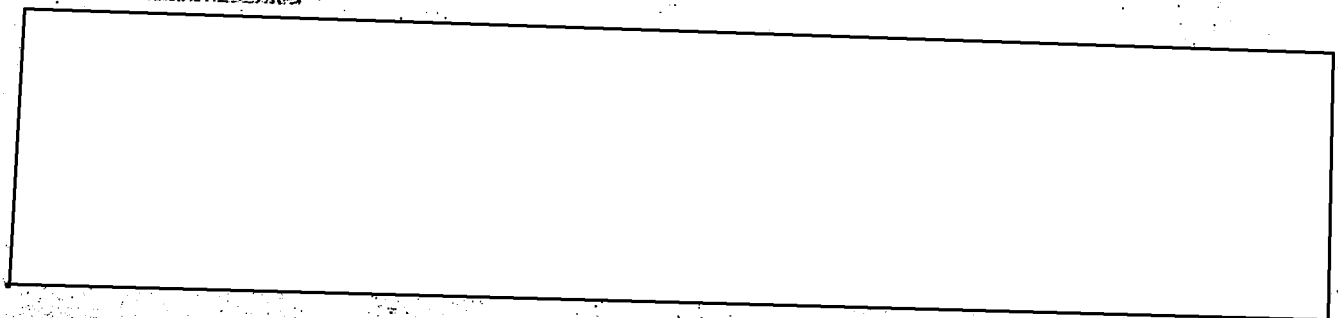
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- 2.1 A Mark 3 Recovery Vehicle, in accordance with the weight allowance listed in Mark 3 RV Installed Developmental Specification. Equipment design for the Mk 3 RV shall be identical to the Mk 2 RRV when determined possible by the Contractor.
- 2.2 A Mark 3 Mod A RV capability of glass shield design.
- 2.3 A Mark 3 Mod B RV capability of nylon shield design.
- 2.4 CSE modifications into necessitated by the differences between the Mk 3 RV and Mk 2 RRV will be provided as determined by the Contractor. Modification requirements will be reported to INSD within 60 days after initiation of the Mk 3 RV Program.
- 2.5 Drawings or engineering sketches, complete sets of which will be furnished INSD.
- 2.6 RATU's to simulate the recovery body with provision for static-line and lanyard initiation of recovery sequence.

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3.0 Test Program



3.1 Drop Tests

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The Contractor will direct, integrate and perform a series of ten (10) drop tests with the primary objective of developing and qualifying the SARV recovery subsystem.

3.2 Ground Correlation Tests

Thermal and physical tests will be conducted at various facilities to provide correlation between data obtained in controlled ground base environments and flight data.

3.3 Other Tests

In addition to the above, the Contractor shall conduct tests as required by the Mark 3 Detailed Developmental Specification.

4.0 Fabrication, Processing and Shipping

4.1 Delivered equipment shall be developed and fabricated in the quantities shown in Attachment 1, Delivery Schedule. The Mark 3 Mod A units will be initially fabricated using glass shield design. The Mark 3 Mod B units will be initially fabricated using nylon shield design. The Contractor is responsible for providing spare components in accordance with quantities negotiated with LMSD. The Contractor shall recommend spare quantities to LMSD within 21 days after the initiation of the program.

4.2 Quality Assurance Provisions

Quality Assurance provisions shall be in accordance with Mark 3 Detailed Developmental Specification.

4.2.1 Where specific hardware delivered differs from the design as indicated in section 2.5, drawing change instructions or marked engineering sketches will be furnished LMSD which describe the specific hardware delivered.

4.2.2 The Contractor shall provide special quality measurements at remote-sites.

4.3 Shipment

Mk 3 RV units and RAU's will be furnished FOB Philadelphia. Shipment shall be as early as possible, and in accordance with the estimated delivery schedule, Attachment 1.

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#### 4.4 Utilization Plan

The plan for utilization of the Mark 3 RV shall be as follows:

	<u>FLIGHT</u>	<u>BACK-UP</u>
First Mark 3 Flight	Mod A (419)	Mod A (420)
Second Mark 3 Flight	Mod B (421)	Mod A (420)
(a) If first flight shield is recovered		converted to Mod B
(b) If first flight shield is not recovered	Mod (420)	Mod B (421) converted to Mod A

#### 5.0 Program Operation

##### 5.1 Component Retrofit

Mk 3 RV field modification and component retrofit operations shall be accomplished by LMSD with the assistance of Contractor personnel. Contractor recommended field modification or retrofit plans shall be submitted for approval to LMSD in order to establish compatibility with and conformance to launch plan and shutdown requirements.

##### 5.2 Preflight Checkout

Mk 3 RV will receive system assembly and checkout by LMSD. The complete system will then be shipped by LMSD to the launch site where the system checkout will be repeated and the equipment readied for flight by LMSD. The Contractor will provide experienced engineer and technician assistance.

##### 5.3 Post Flight Operations

The Contractor shall examine the Mk 3 RV and data records after recovery, inspection and removal of the payload by LMSD. The recovered Reentry Vehicle will be shipped to the Contractor immediately, for his analysis and retention. The Contractor shall determine, insofar as is practicable, the functional performance of the individual major components. The Contractor shall submit a complete technical report covering this inspection within 30 days following receipt of the RV.

As a minimum, this report shall include an Engineering analysis of the recovered vehicle, with design criteria and correlation thereto.

#### 5.4 Technical Support

The Contractor shall provide field technical support for Work Statement Items 1.3, 1.4, 2.6, 3.1, 3.2, and 3.3.

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